(54) Title: SEGMENTATION OF A DIGITAL IMAGE
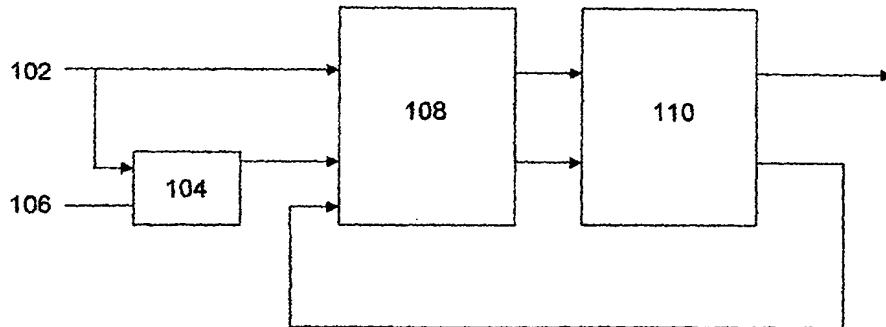
(57) Abstract: Video data is segmented by representing the pixel location, RGB values and other features such as motion vectors, as points in a multidimensional segmentation space. Initialized segments are represented as locations in the segmentation space and segment membership then determined by the distance in segmentation space from the data point representing the pixel to the location of the segment. The distance measure takes into consideration the covariance of the data, for the segment or for the picture.

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7   G06T5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7   G06T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

INSPEC, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category°	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CASTAGNO R ET AL: "VIDEO SEGMENTATION BASED ON MULTIPLE FEATURES FOR INTERACTIVE MULTIMEDIA APPLICATIONS" IEEE TRANSACTIONS ON CIRCUITS AND SYSTEMS FOR VIDEO TECHNOLOGY, IEEE INC. NEW YORK, US., vol. 8, no. 5, 1 September 1998 (1998-09-01), pages 562-571, XP000779453 ISSN: 1051-8215 abstract sections C-F figure 8 -/--	1-31

| X | Further documents are listed in the continuation of box C. | ☐ Patent family members are listed in annex. |

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
8 March 2004	23/04/2004

| Name and mailing address of the ISA
 European Patent Office, P.B. 5818 Patentlaan 2
 NL – 2280 HV Rijswijk
 Tel. (+31–70) 340–2040, Tx. 31 651 epo nl,
 Fax: (+31–70) 340–3016 | Authorized officer

 Gao, M |

Form PCT/ISA/210 (second sheet) (January 2004)

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	STEPHEN D. SCOTT: "Lecture 7: Clustering: Basic concepts" INTERNET, 'Online! 2001, XP002272720 Retrieved from the Internet: \<URL:http://csce.unl.edu/{sscott/CSCE970-spr01/slides/7:cluster-basic.pdf> 'retrieved on 2004-03-05! slide 11	1-31
A	OHM J-R ET AL: "Feature-based cluster segmentation of image sequences" IMAGE PROCESSING, 1997. PROCEEDINGS., INTERNATIONAL CONFERENCE ON SANTA BARBARA, CA, USA 26-29 OCT. 1997, LOS ALAMITOS, CA, USA,IEEE COMPUT. SOC, US, 26 October 1997 (1997-10-26), pages 178-181, XP010253706 ISBN: 0-8186-8183-7 sections 2-3	

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT